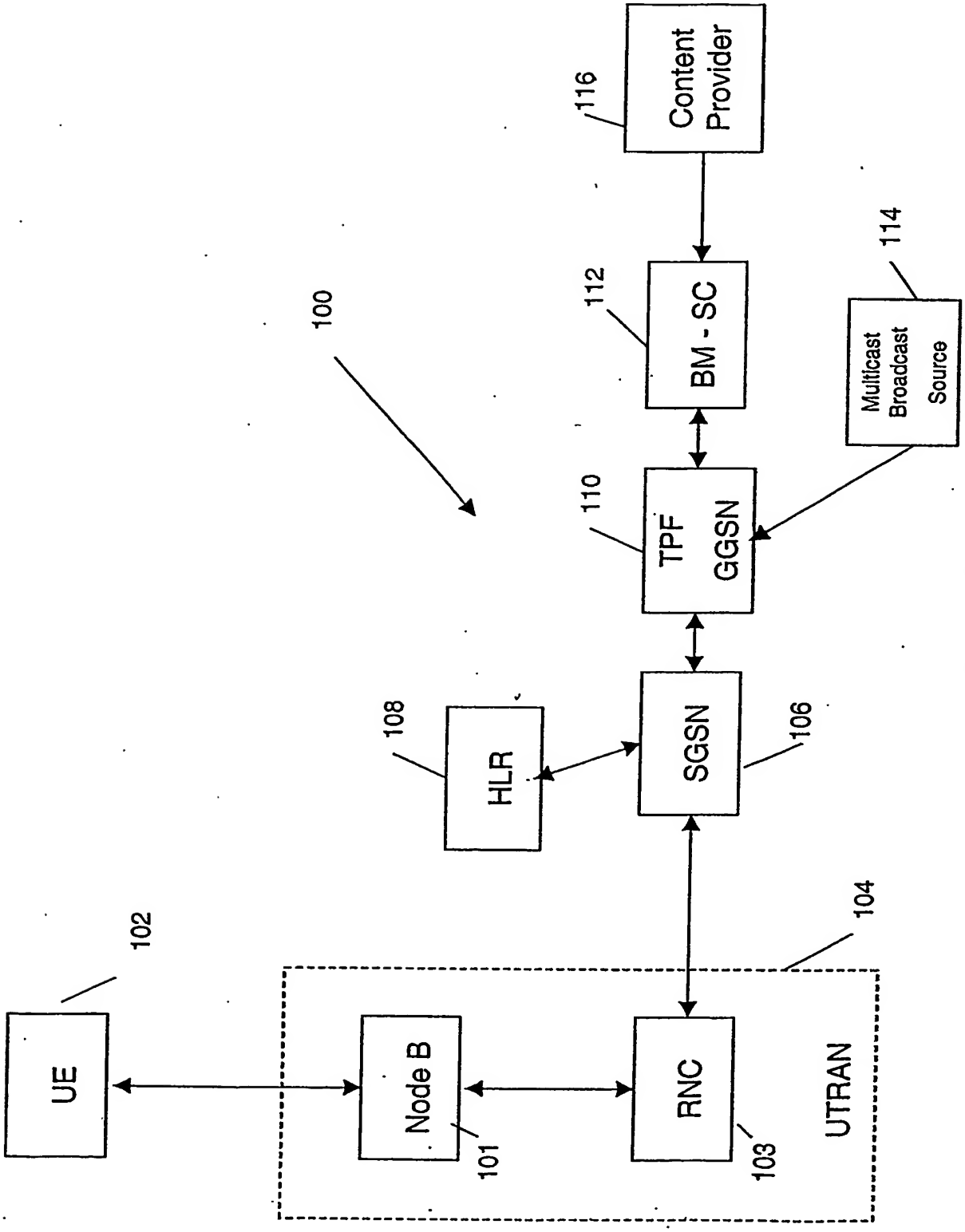
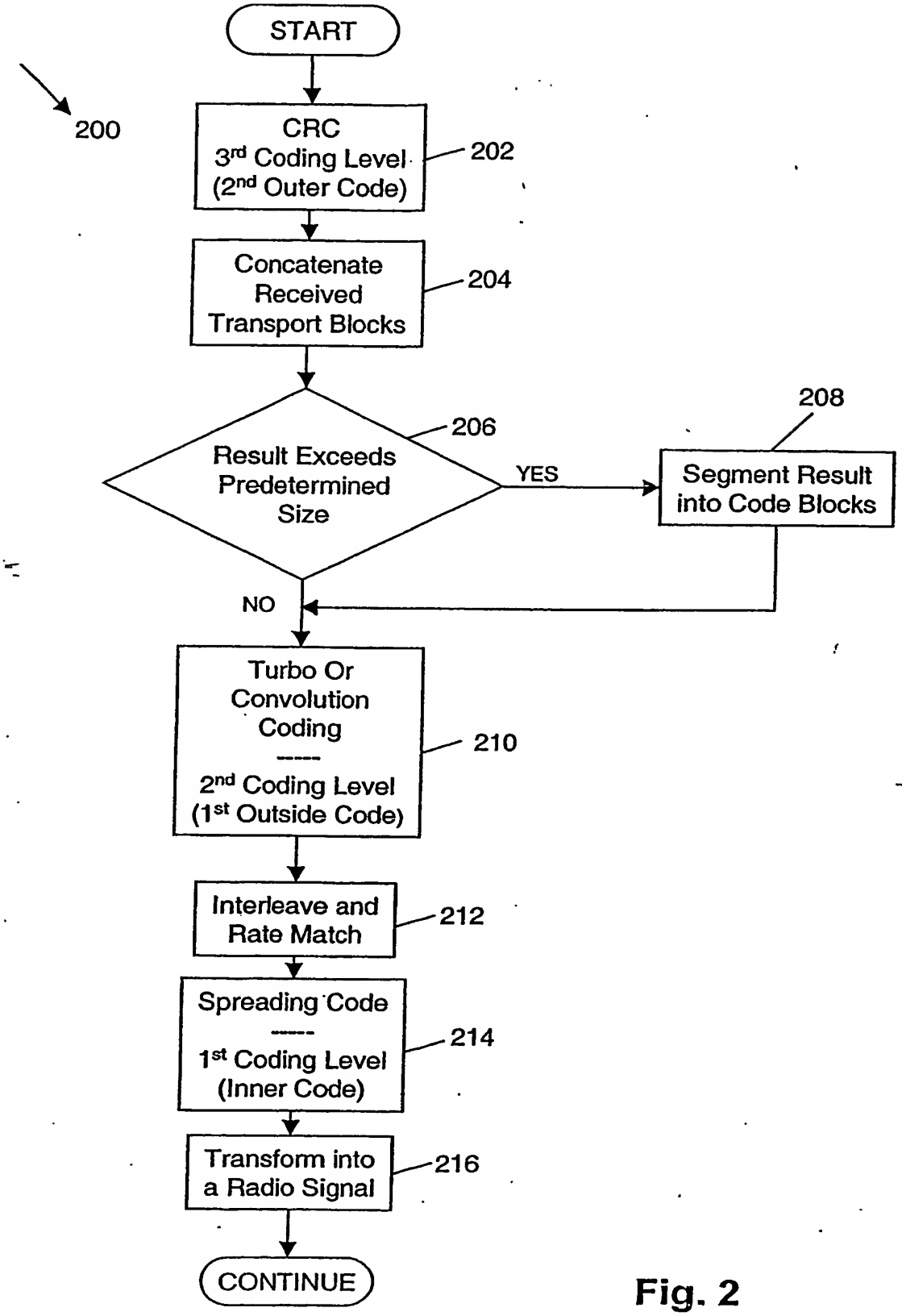

Content Provider
116
BM - SC
112
Multicast Broadcast Source
114
100
TPF GGSN
110
HLR
108
SGSN
106
104
UE
102
Node B
101
RNC
103
UTRAN

Fig. 1

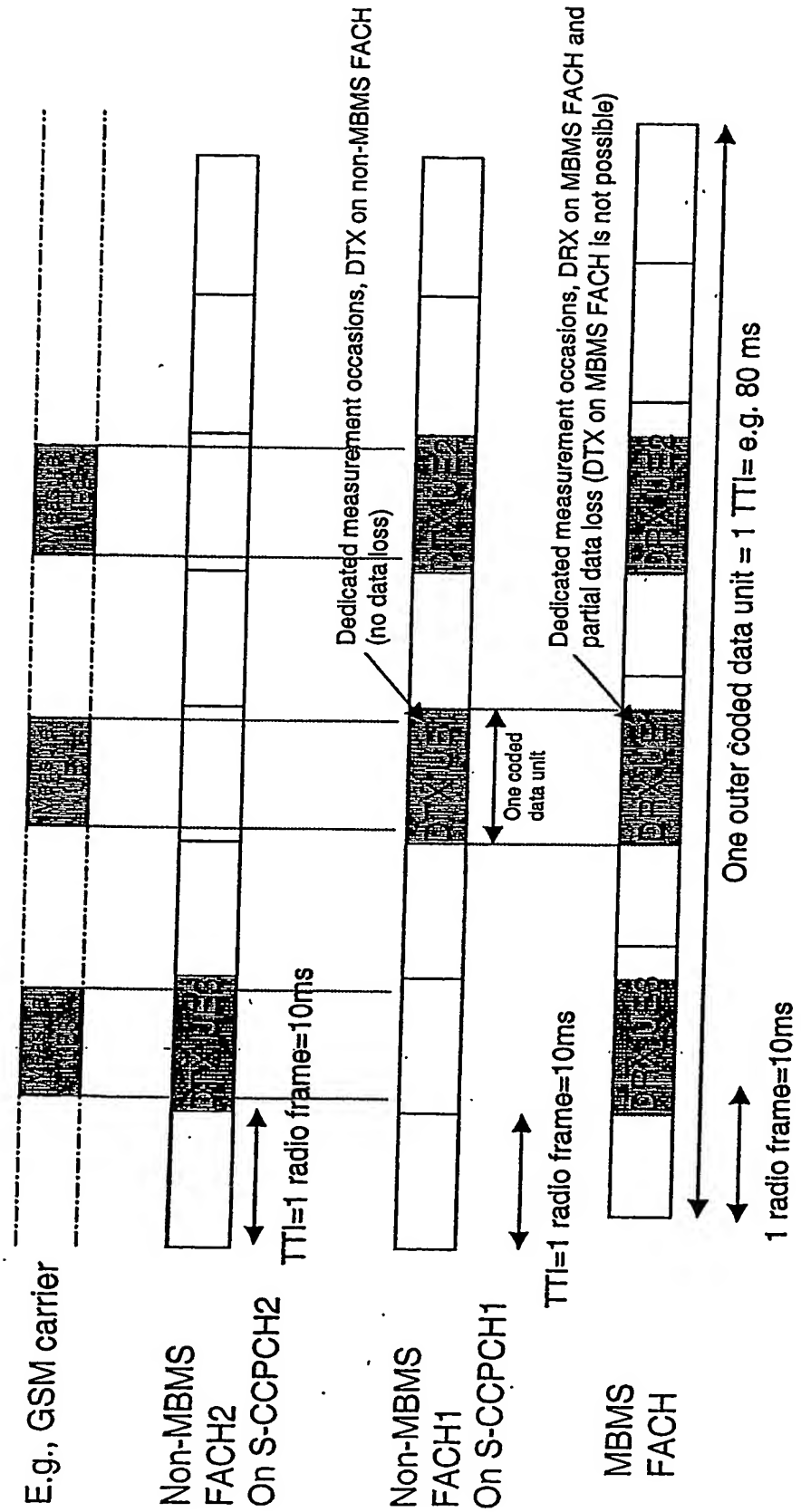

START
200
CRC
3rd Coding Level
(2nd Outer Code)
202
Concatenate
Received
Transport Blocks
204
Result Exceeds
Predetermined
Size
206
YES
208
Segment Result
into Code Blocks
NO
Turbo Or
Convolution
Coding

2nd Coding Level
(1st Outside Code)
210
Interleave and
Rate Match
212
Spreading Code

1st Coding Level
(Inner Code)
214
Transform into
a Radio Signal
216
CONTINUE

Fig. 2

Fig. 3


E.g., GSM carrier
Non-MBMS FACH2 On S-CCPCH2
Non-MBMS FACH1 On S-CCPCH1
MBMS FACH
TTI=1 radio frame=10ms
TTI=1 radio frame=10ms
1 radio frame=10ms
Dedicated measurement occasions, DTX on non-MBMS FACH (no data loss)
Dedicated measurement occasions, DRX on MBMS FACH and partial data loss (DTX on MBMS FACH is not possible)
One coded data unit
One outer coded data unit = 1 TTI= e.g. 80 ms

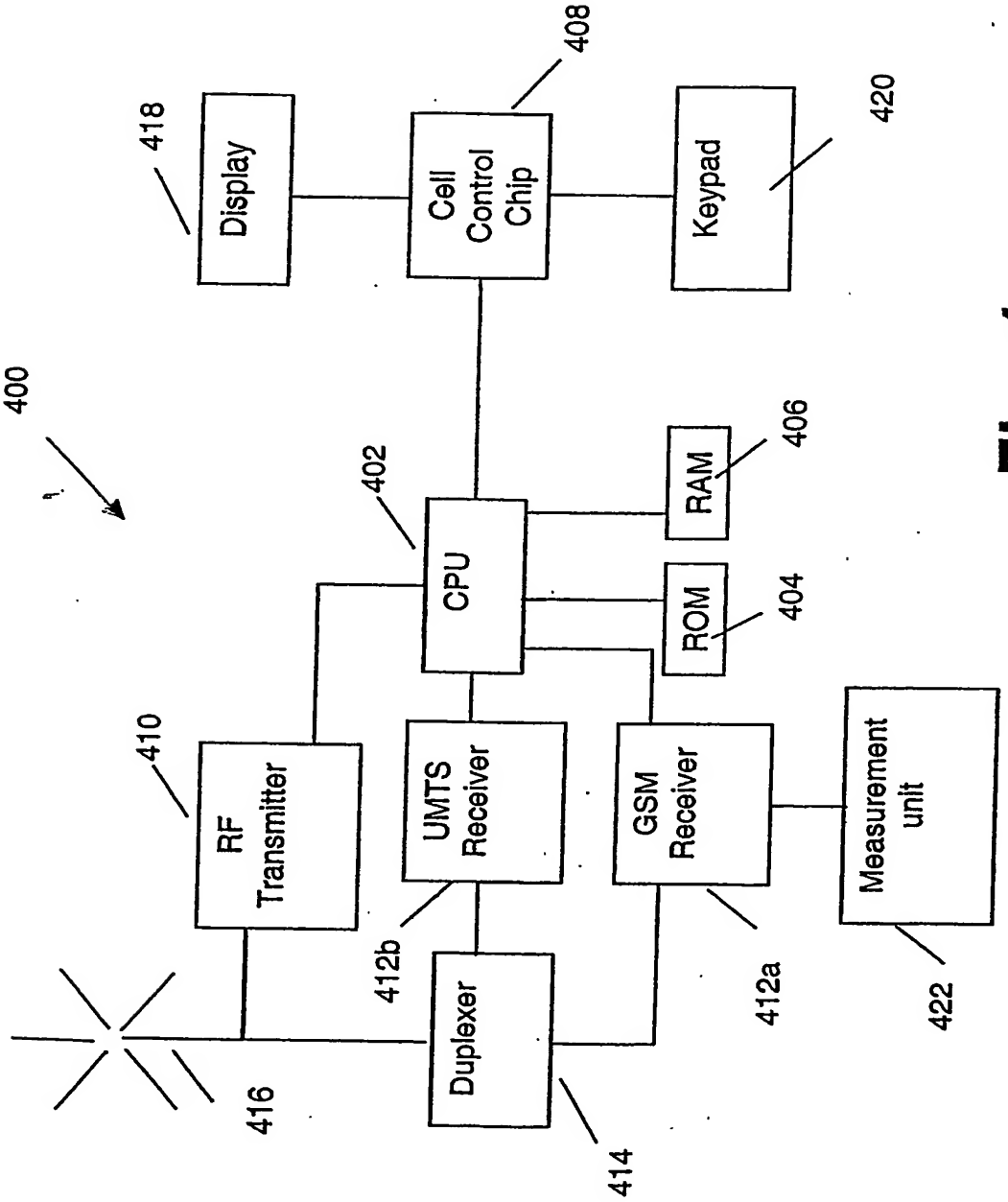

400
418
Display
408
Cell Control Chip
420
Keypad
402
CPU
406
RAM
404
ROM
410
RF Transmitter
UMTS Receiver
GSM Receiver
Measurement unit
412b
412a
422
Duplexer
416
414

Fig. 4

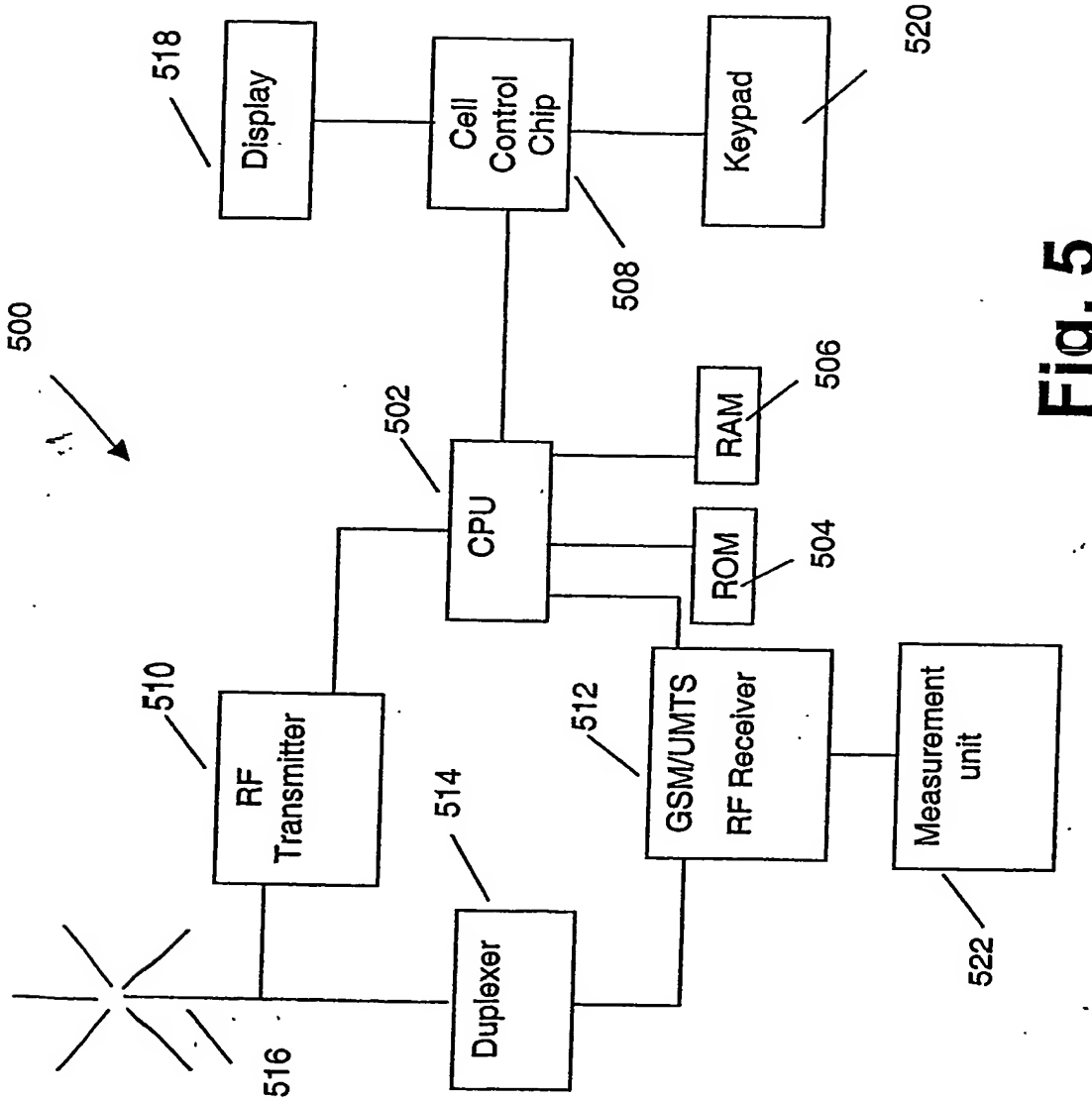

500
518
Display
Cell Control Chip
508
Keypad
520
502
CPU
RAM
506
ROM
504
510
RF Transmitter
512
GSM/UMTS RF Receiver
Measurement unit
522
514
Duplexer
516

Fig. 5

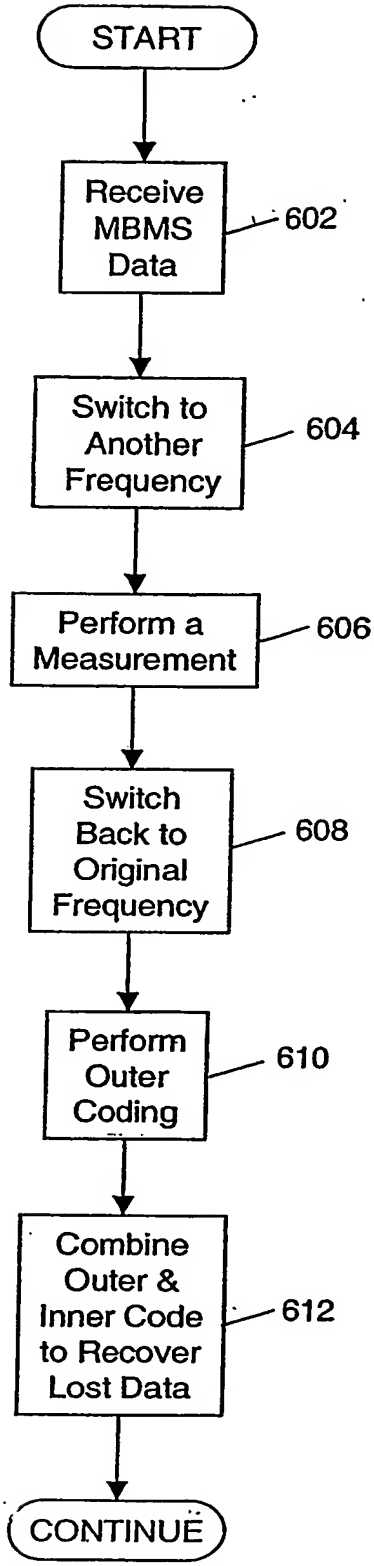

START
Receive MBMS Data
602
Switch to Another Frequency
604
Perform a Measurement
606
Switch Back to Original Frequency
608
Perform Outer Coding
610
Combine Outer & Inner Code to Recover Lost Data
612
CONTINUE

Fig. 6a

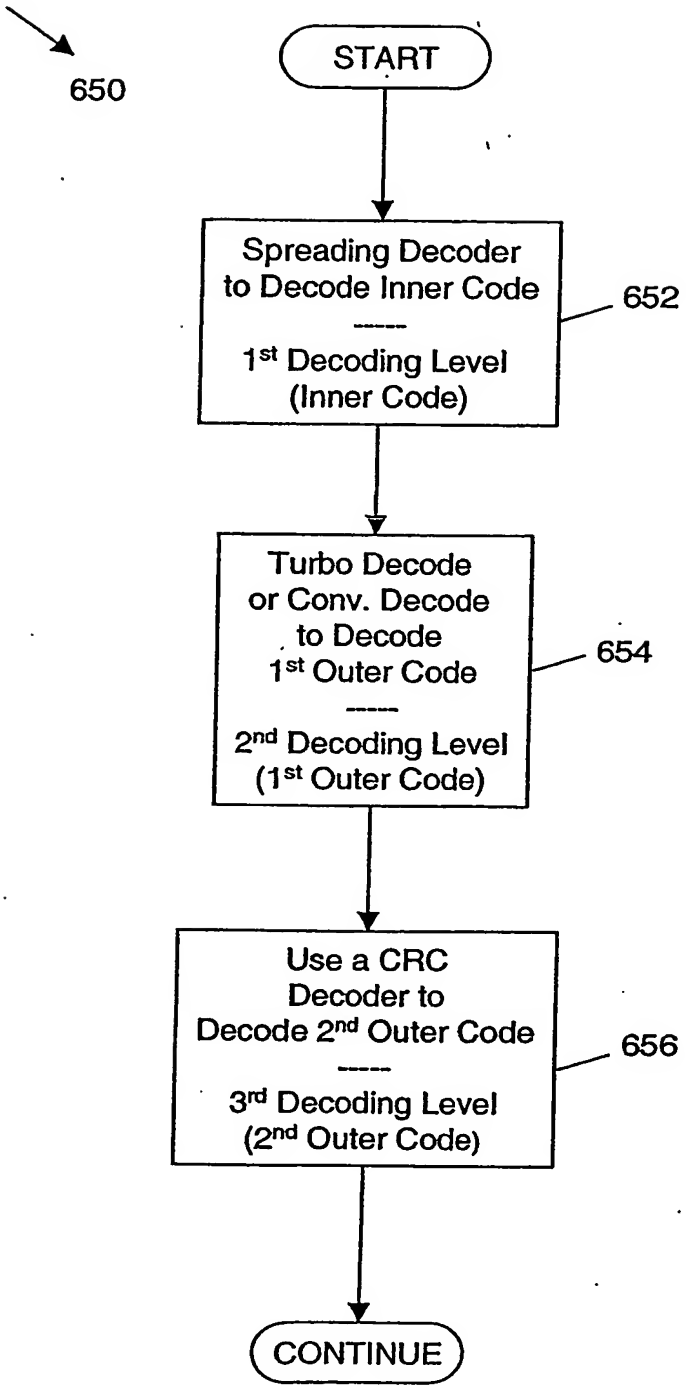
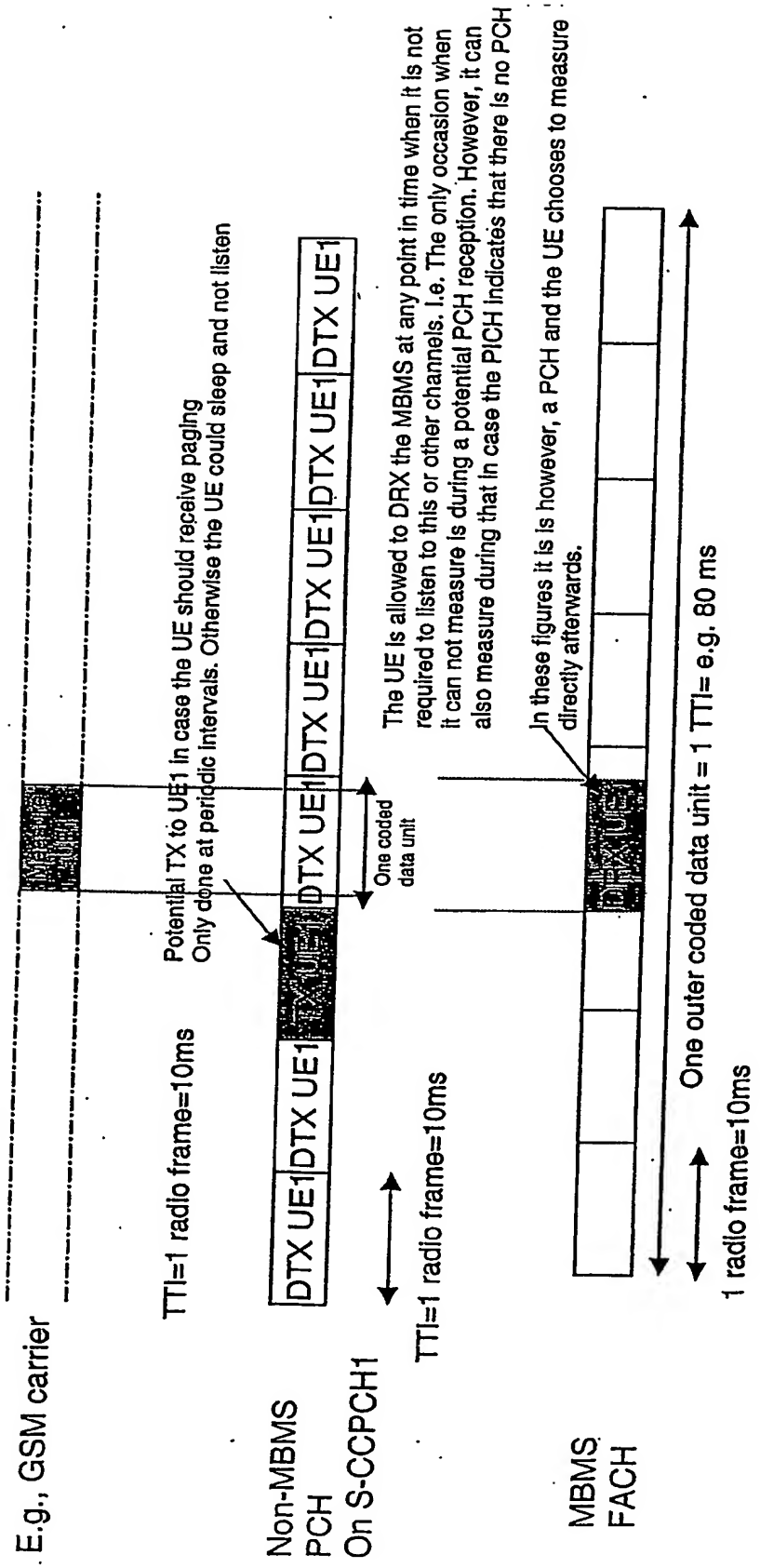

650
START
Spreading Decoder to Decode Inner Code
1st Decoding Level (Inner Code)
652
Turbo Decode or Conv. Decode to Decode 1st Outer Code
2nd Decoding Level (1st Outer Code)
654
Use a CRC Decoder to Decode 2nd Outer Code
3rd Decoding Level (2nd Outer Code)
656
CONTINUE

Fig. 6b

Fig. 7


E.g., GSM carrier
TTI=1 radio frame=10ms
Potential TX to UE1 in case the UE should receive paging
Only done at periodic intervals. Otherwise the UE could sleep and not listen
DTX UE1
DTX UE1
DTX UE1
DTX UE1
DTX UE1
DTX UE1
One coded data unit
Non-MBMS PCH On S-CCPCH1
TTI=1 radio frame=10ms
The UE is allowed to DRX the MBMS at any point in time when it is not required to listen to this or other channels. I.e. The only occasion when it can not measure is during a potential PCH reception. However, it can also measure during that in case the PICH indicates that there is no PCH
In these figures it is however, a PCH and the UE chooses to measure directly afterwards.
DRX UE1
One outer coded data unit = 1 TTI= e.g. 80 ms
1 radio frame=10ms
MBMS FACH